Commonwealth of Kentucky
Division for Air Quality

COMMENTS AND RESPONSE

ON THE DRAFT PERMIT

Comments on Louisville Gas & Electric Company's Magnolia Natural Gas Storage and Compression Station Draft Title V Air Quality Permit submitted by Marlene Zeckner Pardee, Senior Environmental Scientist.

Permit Statement of Basis

1. "LG&E is requesting that all references to scf/hr for units 1, 3, 4, and 6, be removed from the **Statement of Basis.** The Statement of Basis notes the mmbtu/hr descriptions that are required for the emission inventory calculations. The scf/hr value is dependent upon the Btu value of the NG, which is a variable, and could products misleading emissions if the actual Btu value is not included in the emissions calculation. LG&E and KDAQ's emission inventory section use mmbtu/hr, flow of NG (scf) and heat input (Btu), not hours of operation, to calculate emissions.

If KDAQ believes that this data should remain in the permit, then LG&E requests that a note be added to indicate that the scf/hr value is dependent upon the actual heat rate of the NG. Also, the scf/hr number for Unit 5 appears to be a typo. The number should be '8,687 scf/hr' not '8 6,867 scf/hr.'"

Division's response: The Division does not concur. Unit 1 is the Afterburner for the Hydrogen Sulfide Purification Plants. It has two sources of emissions; the gases that pass through as process waste, and the natural gas that is burned to destroy these gases. These two sources of emissions must be calculated separately. That is why values are included for both the process gases and the natural gas for combustion fuel. The process gases are described in scf/hr, whereas the natural gas for combustion in the afterburner is described in MMBtu/hr. Therefore the Division has left the description of Unit no. 1 the same.

The Division concurs with the editorial error comment and has removed the values given in scf/hr.

Title V Permit

2. "LG&E is requesting that all references to scf/hr for units 1, 3, 4, and 6, be removed from the **permit**. The Permit notes the mmbtu/hr descriptions that are required for the emission inventory calculations. The scf/hr value is dependent upon the Btu value of the NG, which is a variable, and could products misleading emissions if the actual Btu value is not included in the emissions calculation. LG&E and KDAQ's emission inventory section use mmbtu/hr, flow of NG (scf) and heat input (Btu), not hours of operation, to calculate emissions.

If KDAQ believes that this data should remain in the permit, then LG&E requests that a note be added to indicate that the scf/hr value is dependent upon the actual heat rate of the NG. Also, the scf/hr number for Unit 5 appears to be a typo. The number should be '8,687 scf/hr' not '8 6,867 scf/hr.'"

Division's response: Unit 1 is the Afterburner for the Hydrogen Sulfide Purification Plants. It has

two sources of emissions; the gases that pass through as process waste, and the natural gas that is burned to destroy these gases. These two sources of emissions must be calculated separately. That is why values are included for both the process gases and the natural gas for combustion fuel. The process gases are described in scf/hr, whereas the natural gas for combustion in the afterburner is described in MMBtu/hr. Therefore the Division has left the description of Unit no. 1 the same.

Tthe Division concurs with this comment and has removed the values given in scf/hr.

3. "Emission Unit 01/Description – LG&E is requesting that the description be changed from '85 MMscf/day process gas max flow to:

One purifier rated capacity of 35 MMscf/day
One purifier rated capacity of 50 MMscf/day

This would be a more accurate description, and it ties in with the description noted on page 8 for the BTEX afterburner."

Division's response: The Division has revised the permit as requested by the source.

4. "Emission Unit 05/Emission Limitations – LG&E requests that KDAQ provide the calculations that were used for the PM limit (0.63 lb/mmbtu) and the SO_2 limit (5.50 lb/mmbtu). LG&E was unable to calculate these emission limits. Please see Attachment A."

Division's response: The Division revisited the emission limitations for PM and SO_2 for Unit 05. Unit 05 consists of two boilers with two separate stacks. Therefore, emission limits were developed for "each" boiler, instead of using the total heat input capacity of both boilers.

Pursuant to Section 4(1) of 401 KAR 61:015, the PM emission rate for boilers #1and #2 is 0.65 lb/MMBtu.

Pursuant to Section 5(1) of 401 KAR 50:025, the SO_2 emission rate for boilers #1 and #2 is 5.56 lb/MMBtu.

The emission limit values in the Permit and the Permit Statement of Basis have been changed.

5. "Insignificant Activities / Antifreeze usage for compressor engine cooling – LG&E believes that the inclusion of 'antifreeze usage for compressor engine cooling' on the insignificant activities list is an error that has been carried over since the initial Title V application was submitted in 1996. Antifreeze is not a regulated pollutant. If KDAQ agrees, then LG&E requests that 'antifreeze usage from compressor engine cooling' be removed from the permit. If it is not removed, please check the regulatory reference. There appears to be a typo, 401 KAR 61:120 covers existing fabric vinyl and paper surface coating operations."

Division's response: The Division has revised the permit as requested by the source.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec.

51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.